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10/568,231	02/14/2006	Viktor Arbanas		9626

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Max Fogiel
44 Maple Court
Highland Park, NJ 08904

EXAMINER

HO, HA DINH

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,231	Applicant(s) ARBANAS, VIKTOR	
	Examiner Ha D. Ho	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the first Office Action on the merits of Application No. 10/568,231 filed on 02/14/06. Claims 1-21 are currently pending.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because of:

- Exceeding 150 words in length, and
- Using the form and legal phraseology often used in patent claims, i.e., "said."

Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

- Lacking of section headings.
- The reference to the claim is improperly made on page 1, the 1st paragraph, and on page 3, the 2nd paragraph.

Appropriate correction is required.

Claim Objections

5. Claims 3, 5-15 and 18-20 are objected to because of the following informalities:
- In line 1 of each of the claims 3, 5-15 and 18-20, “claims” should be changed to --claim--.
 - Claim 14, line 2, --the-- should be inserted after “as”.
 - Claim 18, line 4, “turning” should be changed to --train--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- The following limitations in the claims lack antecedent basis:
 - “the gear ratio” in claim 1, line 1,
 - “the device for changing the conversion ratio” in claim 1, line 2,
 - “the conversion ratio” in claim 1, line 2,
 - “the steering interventions” in claim 1, line 4,
 - “the driver” in claim 1, line 4,

- “the wheels” in claim 1, line 5,
- “the steered wheels” in claim 1, line 7,
- “the vehicle” in claim 2, line 2,
- “the function parts” in claim 3, line 3,
- “the associated function parts” in claim 4, line 3,
- “the other couplings” in claim 7, line 4,
- “the three couplings” in claim 8, line 2,
- “the couplings” in claim 9, line 2,
- “the steering gear” in claim 11, lines 2-3,
- “the driving device” in claim 11, line 3,
- “the driven device” in claim 11, line 3,
- “the steering gear” in claim 12, line 4,
- “the driving device” in claim 12, line 5,
- “the driven device” in claim 12, line 6,
- “the actual driving situation” in claim 13, line 4,
- “the driven shaft” in claim 18, line 11,
- “the drive shaft” in claim 18, line 20,
- “the drive shaft” in claim 18, lines 22-23,
- “the driven shaft” in claim 18, line 23,
- “the driven shaft” in claim 19, line 11,
- “the drive shaft” in claim 19, line 16,
- “the drive shaft” in claim 19, lines 18-19,

- “the driven shaft” in claim 19, line 19,
 - “the drive shaft” in claim 20, line 2,
 - “the driven shaft” in claim 20, line 3, and
 - “the steering differential” in claim 20, line 4.
- Claim 1, line 4, the term “them” is unclear because the intended antecedent of “them” is unclear.
 - Regarding claims 12 and 20, line 4, the phrases "for example" and "especially" render the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3-5, 8-11 and 13-16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kojo et al (US 6,199,654).

Kojo et al teaches a vehicle steering system (see Fig. 1) with a device (14, 40) for changing the gear ratio and with an electrical auxiliary drive (40, 50, 52), a steering wheel 10, a driving unit 44, which can be driven by the steering wheel 10, and a driven element 12b, which is connected with the steered wheels 24, as well as at least two planetary gearings (52-66), characterized in that one of the planetary gearings (52-58) can be driven by the rotor 48 of an

electric motor 40, the driving moment, starting out from the steering wheel (20), is superimposed by the driving moment of the electric motor and are initiated jointly as output moment into the driven element 12b, the ratio of the rotational speed of the driving unit 44 to that of the driven element 12b being adjustable.

As to claim 3, the rotational movement of the steering wheel 10 can be introduced over the driving unit 44 into one of function parts (54, 56, 62, 64) of one of the planetary gearings.

As to claim 4, the rotational movement of the steering wheel 10 can be connected by means of a coupling 106 with associated function parts (56, 64) of the associated planetary gearing.

As to claim 5, the driving unit 44 can be connected in such a manner with a function part of the planetary gearing, that reaction forces from the electric auxiliary power drive (40, 50, 52) have only a slight effect on the steering force.

As to claims 8 and 9, there is one coupling unit 106 being constructed as positive coupling.

As to claim 10, the electric motor 40, the driving unit 44, the driven element 12b and the two planetary gearings (52-66) are disposed coaxially with one another.

As to claim 11, the driving unit 44 and the driven element 12b are disposed between the steering wheel 10 and the steered wheels 24 for transferring a rotational movement.

As to claim 13, the rotational speed and the direction of rotation of the driven element 12b are specified by a control device 28 on the basis of the evaluation of an actual driving situation and adjusted by way of an appropriate control of the electrical auxiliary drive.

As to claim 14, only a single electric motor is used as electrical auxiliary drive.

As to claim 15, the planetary gearing is constructed as a planetary gear train.

As to claim 16, the internal gear wheels (56, 64) of the planetary gear train and/or the planet wheels (54, 62) are constructed in two parts in the axial direction.

10. Claims 1, 2, 3, 5, 6, 8, 9, 11, 15 and 16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Tervola (US 4,718,508).

Tervola teaches a vehicle steering system (see Fig. 7) with a device 1 for changing the gear ratio and with an electric motor 17, a steering wheel 11, a driving unit 12, which can be driven by the steering wheel 10, and a driven element 5, which is connected with the steered wheels 8, as well as at least two planetary gearings 30, wherein the driving moment, starting out from the steering wheel 11, is superimposed by the driving moment of the electric motor and are initiated jointly as output moment into the driven element 5, the ratio of the rotational speed of the driving unit 12 to that of the driven element 5 being adjustable.

As to claim 2, the housing is connected non-rotationally with the vehicle.

As to claim 3, the rotational movement of the steering wheel 11 can be introduced over the driving unit 12 into one of function parts (32, 34) of one of the planetary gearings.

As to claim 5, the driving unit 12 can be connected in such a manner with a function part 34 of the planetary gearing, that reaction forces from the electric motor 17 have only a slight effect on the steering force.

As to claim 6, the rotational movement of the steering wheel can be blocked by means of a further coupling (10, 17) (see col. 4, line 33-38).

As to claims 8 and 9, there is one coupling unit (22-25) being constructed as positive coupling.

As to claim 11, the driving device 12 and the driven element 5 are disposed between the steering wheel 11 and the steered wheels 8 for transferring a rotational movement.

As to claim 15, the planetary gearing is constructed as a planetary gear train.

As to claim 16, the internal gear wheels 34 of the planetary gear train and/or the planet wheels 32 are constructed in two parts in the axial direction.

11. Claims 1, 3, 5, 7-11 and 13-16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kalns (US 4,573,545).

Kalns teaches a vehicle steering system (see Fig. 2) with a device (10, 14) for changing the gear ratio and with an electric motor 10, a steering wheel 27, a driving unit 24, which can be driven by the steering wheel 10, and a driven element 26, which is connected with the steered wheels (not shown, see col. 3, line 40), as well as at least two planetary gearings 14, wherein the driving moment, starting out from the steering wheel 27, is superimposed by the driving moment of the electric motor and are initiated jointly as output moment into the driven element 26, the ratio of the rotational speed of the driving unit 12 to that of the driven element 5 being adjustable.

As to claim 3, the rotational movement of the steering wheel 27 can be introduced over the driving unit 24 into one of function parts (16b, 22b) of one of the planetary gearings.

As to claim 5, the driving unit 24 can be connected in such a manner with a function part 22b of the planetary gearing, that reaction forces from the electric motor 10 have only a slight effect on the steering force.

As to claim 7, the rotational movement of the steering wheel 27 can be passed on directly to the driven element 26 by means of a third coupling 28, the electrical auxiliary drive 10 being severed by severing one or both of couplings (40, 42) of the electrical auxiliary power drive.

As to claims 8 and 9, there is one coupling unit 28 being constructed as positive coupling.

As to claim 10, the electric motor 10, the driving unit 24, the driven element 26 and the two planetary gearings 14 are disposed coaxially with one another.

As to claim 11, the driving unit 24 and the driven element 26 are disposed between the steering wheel 27 and the steered wheels for transferring a rotational movement.

As to claim 13, the rotational speed and the direction of rotation of the driven element 26 are specified by a control device 36 on the basis of the evaluation of an actual driving situation and adjusted by way of an appropriate control of the electrical auxiliary drive 10.

As to claim 14, only a single electric motor is used as electrical auxiliary drive.

As to claim 15, the planetary gearing is constructed as a planetary gear train.

As to claim 16, the internal gear wheels (25a, 25b) of the planetary gear train and/or the planet wheels (20a, 20b) are constructed in two parts in the axial direction.

12. Claims 1, 3, 5 and 11-16, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu (US 5,423,391).

Shimizu teaches a vehicle steering system (see Fig. 2) with a device (43, 51, 52) for changing the gear ratio and with an electric motor 53, a steering wheel 21, a driving unit 22, which can be driven by the steering wheel 10, and a driven element 24, which is connected with the steered wheels 50, as well as at least two planetary gearings (51, 52), wherein the driving moment, starting out from the steering wheel 21, is superimposed by the driving moment of the electric motor and are initiated jointly as output moment into the driven element 24, the ratio of the rotational speed of the driving unit 22 to that of the driven element 24 being adjustable.

As to claim 3, the rotational movement of the steering wheel 21 can be introduced over the driving unit 22 into one of function parts (51a, 51b) of one of the planetary gearings.

As to claim 5, the driving unit 22 can be connected in such a manner with a function part 51a of the planetary gearing, that reaction forces from the electric motor 53 have only a slight effect on the steering force.

As to claim 11, the driving unit 22 and the driven element 24 are disposed between the steering wheel 21 and the steered wheels 50 for transferring a rotational movement.

As to claim 12, it has a conversion transmission 44 for converting a rotational movement into a translational movement, and is disposed between the steering wheel 21 and at least one steering tie rod 47 and the driving unit 22 and the driven element 24 are constructed for transferring a rotational movement and a driven device 45 is constructed for transferring a translational movement.

As to claim 13, the rotational speed and the direction of rotation of the driven element 24 are specified by a control device 33 on the basis of the evaluation of an actual driving situation and adjusted by way of an appropriate control of the electrical auxiliary drive 53.

As to claim 14, only a single electric motor is used as electrical auxiliary drive.

As to claim 15, the planetary gearing is constructed as a planetary gear train.

As to claim 16, the internal gear wheels (51d, 62d) of the planetary gear train and/or the planet wheels (51b, 52c) are constructed in two parts in the axial direction.

13. Claims 1-5, 8, 9, 11 and 14-17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Nagao et al (US 6,026,925).

Nagao et al teaches a vehicle steering system (see Fig. 13) with a device 700 for changing the gear ratio and with an electric motor 701, a steering wheel (left side), a driving unit 703, which can be driven by the steering wheel, and a driven element 704, which is connected with the steered wheels (right side), as well as at least two planetary gearings (721-725), wherein the driving moment, starting out from the steering wheel, is superimposed by the driving moment of the electric motor and are initiated jointly as output moment into the driven element 704, the ratio of the rotational speed of the driving unit 703 to that of the driven element 704 being adjustable.

As to claim 2, the housing (708, 709) is connected non-rotationally with the vehicle.

As to claim 3, the rotational movement of the steering wheel can be introduced over the driving unit 703 into one of function parts (725, 703d) of one of the planetary gearings.

As to claim 4, the rotational movement of the steering wheel can be connected by means of a coupling (738, 739) with associated function parts (725, 723) of the associated planetary gearing.

As to claim 5, the driving unit 703 can be connected in such a manner with a function part 703d of the planetary gearing, that reaction forces from the electric motor 701 have only a slight effect on the steering force.

As to claims 8 and 9, there is one coupling unit (738, 739) being constructed as positive coupling.

As to claim 11, the driving unit 703 and the driven element 704 are disposed between the steering wheel and the steered wheels for transferring a rotational movement.

As to claim 14, only a single electric motor is used as electrical auxiliary drive.

As to claim 15, the planetary gearing is constructed as a planetary gear train.

As to claim 16, the planet wheels (722, 724) are constructed in two parts in the axial direction.

As to claim 17, parts of the planet wheels (722, 724) have different numbers of teeth from one another.

Allowable Subject Matter

14. Claims 18-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Cited Prior Art

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see attached form PTO-892).

Communication

16. Submission of your response by facsimile transmission is encouraged. The fax phone numbers for the organization where this application or proceeding is assigned are **(571) 273-8300**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P.. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to
the Patent and Trademark Office on _____
(Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P.. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha D. Ho whose telephone number is **571-272-7091**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on **571-272-7095**.

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17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/HDH/
(571) 272-7091
January 10, 2008

/Ha D. Ho/
Primary Examiner, A.U. 3681